Solmeta
Geotag your world

Geogagger N2

User Manual

Solmeta Technology Co., Ltd

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Safety Information

To prevent damage to the GPS unit or injury to yourself or to others, please read the following safety instructions before using this equipment.

Do not disassemble

Touching the product's internal parts could result in injury. In the event of malfunction, the products should be repaired only by a qualified technician. Any unauthorized disassembly or modification may void the unit's warranty.

Keep the GPS unit dry

Do not immerse in or expose to water or handle with wet hands. Exposing the GPS unit to water could result fire or electric shock.

Do not subject to high temperatures

The GPS unit can be damaged by exposure to fire or high temperatures. Do not leave the unit in areas subject to extremely high temperatures. Failure to observe this precaution could result in damage to the casing or internal circuitry, causing fire.

Keep out of reach of children

Failure to observe this precaution could result in injury.

FCC/CE Compliance

Shenzhen OMT Technology Co., LTD
3/F., Building 10, Zhongxing Industrial City, Chuangye Road, Nanshan District, Shenzhen, Guangdong, P.R. China (518000)

Verification of Conformity

Verification No.:SZF0807008010

Applicant	:	Shenzhen Solmeta Technology Co., LTD. 513,Chuangye Building, Chuangye 2nd Road, Bao'an 24 District, Shenzhen, P.R. China.
Manufacturer	:	Shenzhen Solmeta Technology Co., LTD. 513,Chuangye Building, Chuangye 2nd Road, Bao'an 24 District, Shenzhen, P.R. China.
Description of Equipment	:	Digital Photo GPS
Model Name	:	Geotagger N
Report No.	:	SZF0807008010
Issued Date	:	Jul. 8, 2008

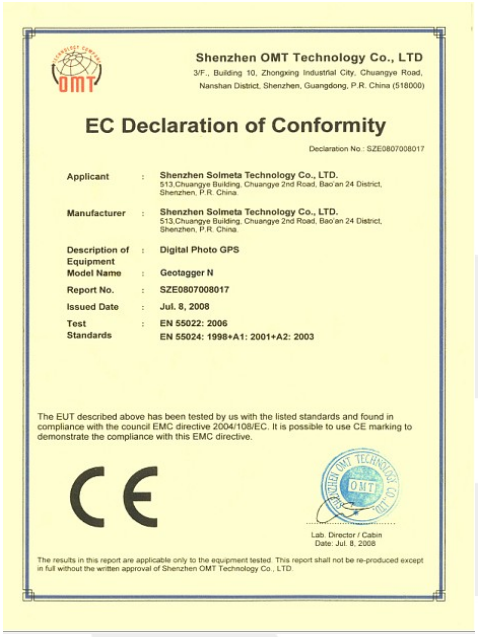
Applicable Standard	
FCC Part 15 B: 2005	Radio Frequency Devices

The EUT has been tested and verified to comply with FCC Part 15 subpart B, Class B digital devices' requirements.

FC

Lab Director / Cabin
Date: Jul. 8, 2008

The results in this report are applicable only to the equipment tested. This report shall not be re-produced except in full without the written approval of Shenzhen OMT Technology Co., LTD



Shenzhen OMT Technology Co., LTD
3/F., Building 10, Zhongxing Industrial City, Chuangye Road, Nanshan District, Shenzhen, Guangdong, P.R. China (518000)

EC Declaration of Conformity

Declaration No.: SZE0807008017

Applicant	:	Shenzhen Solmeta Technology Co., LTD. 513,Chuangye Building, Chuangye 2nd Road, Bao'an 24 District, Shenzhen, P.R. China.
Manufacturer	:	Shenzhen Solmeta Technology Co., LTD. 513,Chuangye Building, Chuangye 2nd Road, Bao'an 24 District, Shenzhen, P.R. China.
Description of Equipment	:	Digital Photo GPS
Model Name	:	Geotagger N
Report No.	:	SZE0807008017
Issued Date	:	Jul. 8, 2008
Test Standards	:	EN 55022: 2006 EN 55024: 1998+A1: 2001+A2: 2003

The EUT described above has been tested by us with the listed standards and found in compliance with the council EMC directive 2004/108/EC. It is possible to use CE marking to demonstrate the compliance with this EMC directive.

CE

Lab Director / Cabin
Date: Jul. 8, 2008

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Overview

Thank you for purchasing Solmeta **Geotagger N2**, a geotagging device that records the latitude, longitude, altitude, heading, and UTC (Coordinated Universal Time) with your photographs with **Nikon D3x, D3s, D3, D700, D300s, D300, D2/x/xs/Hs and D90, D5000** Cameras. The geotagging information is saved as metadata with the image, and can be used in a variety of ways to add value to your photographs.

Unique features

- Embedded the real time geographical information to the EXIF metadata of the digital photo.
- Very high sensitivity, quick cold start.
- Equipped with 2-axis electronic compass which can provide heading information to the digital photo files. The compass can be calibrated.
- Built-in rechargeable battery, doesn't consume the power of the camera, lasting up to 20 hours. Automatically switch to Nikon camera for power source when the device is in low power.
- "Auto" switch design, which allow the Geotagger N2 will turn on when the camera is turned on and will turn off when the camera is turned off. Use-friendly.
- Compatible of multi-model design, which allow you choose the appropriate data cable to match different model camera .
    - CA300 cable for connection to Nikon D3x,D3s,D3, D700, D300s,D300, D200, D2/x/xs/Hs
    - CA90 cable for connection to Nikon D90
    - CA5000 cable for connection to Nikon D5000
- "Indoors" geotagging, automatically tags the photo with the last location information when indoors or loss of GPS signal.
- Supports Flickr, panoramio, Locr, Picasa, etc.

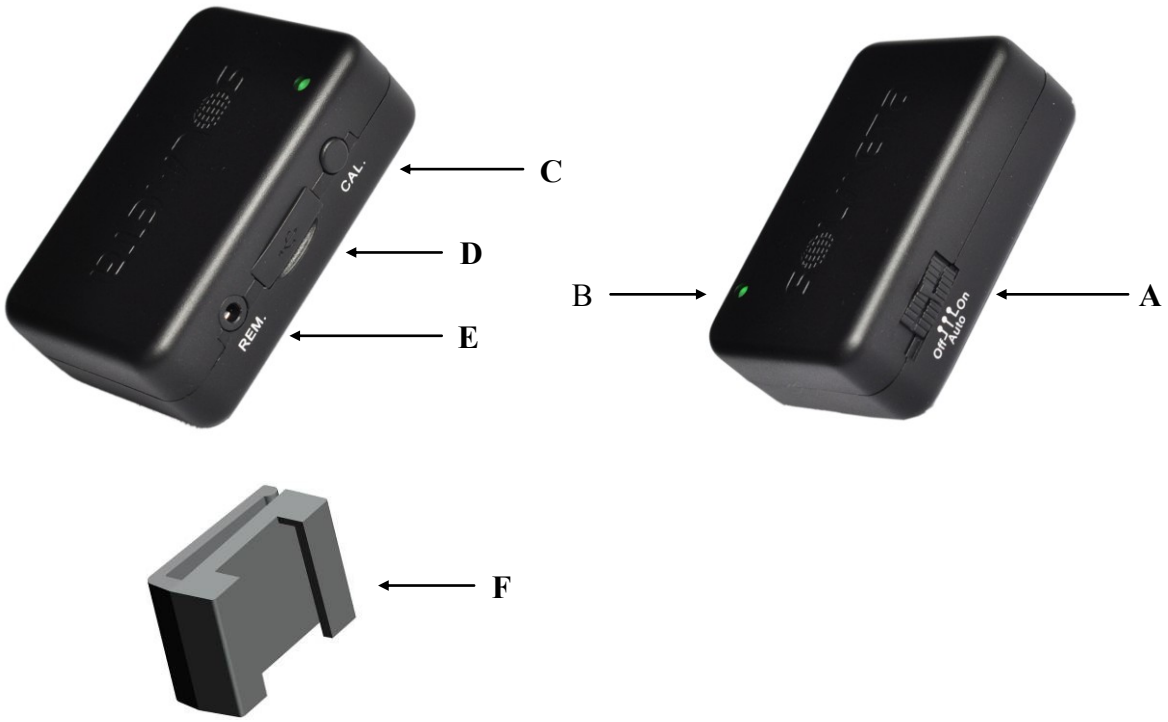
Be sure to read this guide thoroughly before use.

Packing List

Thank you for purchasing the Geotagger N2. Before you start, make sure that the following items are included in your package. If any of these items are missing, please contact us.

- GPS receiver
- Data cable (the cable below only one for package)
  - CA300 cable for connection to Nikon D3X,D3S,D3, D700, D300S,D300, D200, D2/x/xs/Hs
  - CA90 cable for connection to Nikon D90
  - CA5000 cable for connection to Nikon D5000
- USB charging cable
- Wired remote
- Camera strap fastener
- CD containing user manual and software utilities

Product view



A **Power switch**
B **Stadtus LED**
C **Calibration button**
D **USB Port**
E **Remote socket**
F **Camera strap fastener**

Status LED

The N2 has a LED that changes color to signify different operating conditions.

LED COLOR	LED MODE	DESCRIPTION
GREEN	Flashing twice a second	The N2 is searching for GPS satellite signals.
	Steady	The N2 has obtained a signal lock and is ready to record and geotag.

RED	Flashing	The N2 is charging. Low battery warning. N2 requires charging. **NOTE:** When in low battery and connected to camera, the camera will power the N2 automatically.
	Steady	The N2 is in full charge.(N2 is in 'on' position)
Orange	Flashing quickly	Compass calibration mode

Charging

1. Power off the Geotagger N2, then connect the device with a computer or an AC adaptor by the USB charging cable. (The Geotagger N2 can be charged using any 5V standard USB charger)
2. It takes around three hours to fully charge the Geotagger N2 .
3. The LED on the N2 will be red blinking during the charging, and will be steady when the device is in full power.

NOTE

- The built-in rechargeable battery cannot be replaced by users; it needs to be replaced by our professional technician if it needs servicing.

- **Auto Meter off**
  Nikon added a new function to the D3x, D3s, D3, D700, D300s, D300 and D90, D5000. The new function resolved a battery drain issue by allowing the user to select the metering system to stay On or auto Off when GPS signals are received to reduce power consumption.

  To access this function on your Nikon camera, please follow the step below:
  Menu→ Custom Settings Menu→ (C) Timers/ AE Lock→ c2 Auto meter- off delay

How to use the Geotagger N2

Connect the Geotgagger N2 to a compatible camera

1. Turn the camera and the Geotagger N2 off.
2. Mount the Geotagger N2 onto the flash shoe or attach the N2 on the camera strap with the supplied strap fastener. Connect the Geotagger N2 to the camera by the appropriate data cable (The pictures below are with different model Nikon camera)
    - A300 cable for connection to Nikon D3X,D3S,D3, D700, D300S,D300, D200, D2/x/xs/Hs
    - CA90 cable for connection to Nikon D90
    - CA5000 cable for connection to Nikon D5000

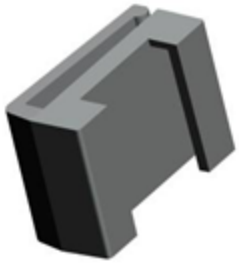
Slide the N2 onto the hot shoe

The N2 connected to the Nikon D300

The N2 connected to the Nikon D90

The N2 connected to the Nikon D5000

Attach the Geotagger N2 on the camera strap with the supplied strap fastener when the hot shoe is not available.



Camera strap fastener

With 10-Pin remote terminal camera

With D90

With D5000

Compass Calibration

The GeotaggerN2 is equipped with an electronic compass which provides heading information to the camera.

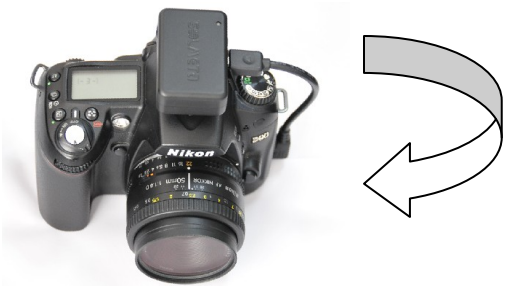
IMPORTANT: When using the Geotagger N2 for the first time, a calibration is required. Repeat these procedures each time you move the N2 and camera more than 100 miles or you are using the different cameras.

Why calibrate?

The compass in the N2 is sensitive to nearby magnetic objects that could cause measuring error. To compensate for this error it is sometime necessary to perform an calibration. (If the compass is accurate, there is no need to perform the calibration)

How to calibrate?

1. With the Geotagger N2 mounted on the hot shoe and the data cable connected with the camera, turn the Geotagger N2 and the camera on.
2. Long press the calibration button for about 5 seconds until the LED turns orange, 2 seconds later the LED orange will be off， then release the calibration button, the LED starts blinking orange.(The LED orange is green and red alternately)
3. Rotate the camera clockwise slowly for two complete 360 circles/rotations. Keep it as horizontal as you can. (See figure below)



4. After both rotating are complete, press the calibration button again to stop the calibration. The LED will start blinking green.

Note:

- Magnetic sensors are very sensitive to nearby magnetic objects , that can cause calibration errors and misreading. Please keep the Geotagger N2 away from magnetic sources when perform a calibration.

- If the compass is not accurate after the calibration, it should be reset. The procedure as below.

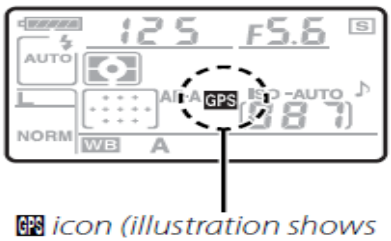
  Long press the calibration button for eight seconds to restore factory default . During this process you will see after two seconds the orange light turns on and after four seconds the orange light turns off and after eighth second the orange light turns on again. You can then release the button to resore the factory default.

- For precise measurement headings, use professional devices.

Capture and record the location data

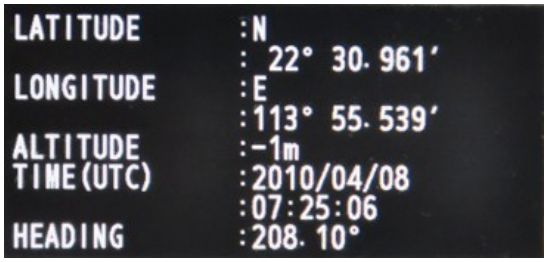
1. With the Geotagger N2 connected to the camera, turn the N2 on. The LED on the N2 will light and blink quickly, after a while will slow down and at last steady, that means the N2 is being fixed and ready to supply the GPS data.

2. Turn the camera on, a GPS icon will be displayed in the control panel on top of the camera.



GPS icon (illustration shows control panel for the D90 digital camera)

3. To view GPS data, select GPS > Position in the camera setup menu (this option is not available with D2X, D2XS, D2HS, and D200 cameras). The current latitude, longitude, altitude, heading , and UTC will be displayed as below.(A electronic compass is equipped the Geotagger N2 , which can supply the compass heading to the photo file.)



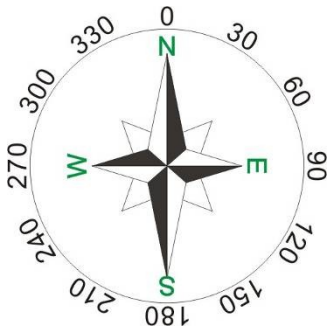
4. Take pictures, GPS data and the heading will be recorded with each photograph.

   (With the Geotagger N2 on "Auto"switch position, the geotagger N2 will turn on when the camera is turned on and will turn off when the camera is turned off. Use-friendly, power saved.)

Note

- To get a quick fix, please take the Geotagger N2 and your camera to an open outside space and stand still.
- If there is no blinking GPS icon in the control panel, check the connection, and make sure the switch is in the correct position.

- To get the GPS data more accurate, we suggest holding the camera steady for a few minutes when the N2 is just being fixed, that is especially important for the value of altitude.
- Some of the Nikon camera has an “auto meter off” option that is also a power saving method. We suggest adjusting it to 30 seconds or more to avoid missing the GPS data, or half press the shutter to activate the GPS when taking a photo.
- **Heading/Compass for Nikon**



0° - North
90° - East
180° - South
270° - West

For proper heading information, the Geotagger N2 should be mounted on the flash shoe of the camera. it points to the same direction as the lens which is mounted on the camera. The Geotagger N2 needs to stay in a horizontal position when measuring, otherwise there will be some deviation.

- **Camera GPS icon status**

No GPS icon	Not connected to the camera
GPS icon blinking	Not fixed, signal searching
GPS icon displayed	GPS fixed

Other operations

Remote Trigger / Shutter Release Pass-through

In order to make sure that Nikon DSLRs can work properly when the remote connecting socket is occupied by Solmeta geotagger, the Geotagger N2 is designed with a 2.5mm remote pass –through. We also provide a remote control in the package which enables you to use the remote trigger when the solmeta geotagger is working .

“ Indoors” Geotagging

One of the main features of the Geotagger N2 is its unique ‘indoor’ GPS signal fixing ability. This feature allows the device to continue to supply location information to the camera, even if signals from GPS satellites are blocked. If you should enter a location, such as a building, where the roof blocks the signals from the GPS satellites, the device memorizes the last location fix and sends this location to the camera for each photograph taken until GPS signals are received again from the satellites and a new fix can be obtained.

Once you leave the no/weak signal area, the device will automatically reacquire a GPS signal to obtain the new, exact location.

If you are taking photographs “indoors” and do not want the last received signal to be recorded in your photos, you can just switch the Geotagger N2 to “Off”.

Warranty

- Solmeta Technology Co.,Limited guarantees its product from manufacturing defects and workmanship for a period of **one-year** from the date of original purchase. During the one-year warranty, Solmeta Technology will repair or replace the product free of charge. Please keep your original invoice as proof of purchase.
- Customers who have products covered under the warranty are required to contact Solmeta Technology by e-mail (service@solmeta.com) for troubleshooting issues before returning the product.
- Customers are responsible for shipping and insurance charges for returning the product to Solmeta Technology.
- Charges will be imposed for repairing product, which is out of warranty coverage or invalid warranty.
- The guarantee is not valid if defect is due to damage caused by incorrect use, poor maintenance or if persons not authorized by Solmeta Technology have carried out alterations or repairs.
- For the device to be used correctly, the user should strictly adhere to all instructions included in the user guide and should abstain from any actions or uses that are described as undesired or which are warned against in the user guide.

Precautions for use

Do not drop: The product may malfunction if subjected to strong shocks or vibration.

Keep dry: This product is not waterproof, and may malfunction if immersed in or exposed to water.

Avoid sudden changes in temperature: Sudden changes in temperature, such as occur when entering or leaving a heated building on a cold day, can cause condensation inside the device. To prevent condensation, place the device in a carrying case or plastic bag before exposing it to sudden changes in temperature.

Keep away from strong magnetic fields: Do not use or store this device in the vicinity of equipment that generates strong electromagnetic radiation or magnetic fields. Strong static charges or the magnetic fields produced by equipment such as radio transmitters could affect the product's internal circuitry.

A note on electronic devices: In extremely rare instances, a strong external static charge may cause the d camera off and disconnect and reconnect the Geotagger N2. In the e t your retailer or Solmeta-authorized service representative.

0°	-	North
90°	-	East
180°	-	South
270°	-	West

Information in this document is subject to change without notice. Solmeta Technology reserves the right to change or improve their products and to make changes in the content without obligation to notify any person or organization of such changes or improvements.

Specifications

GPS	
ELECTRICAL CHARACTERISTICS	
GPS Chipset	SiRF Star III
Frequency	L1, 1575.42 MHz
C/A Code	1.023 MHz chip rate
Channels	20 channel all-in-view tracking
Tracking sensitivity	-159dBm
ACCURACY	
Position Horizontal	10 meters, 2D RMS 1-5 meters 2D RMS, SBAS corrected (WASS，EGNOS，MSAS)
Velocity	0.1m/sec.
Time	1 micro-second synchronized to GPS time
DATUM& PROTOCOL	
Datum	WGS-84
GPS Protocol	NMEA 0138 ASCII
Baud Rate	4,800 bps
ACQUISITION RATE	
Hot start	1 sec
Warm start	38 sec
Cold start	42 sec.
Reacquisition	0.1 sec.
DYNAMIC CONDITION	
Acceleration Limit	Less than 4g
Altitude Limit	18,000 meters (60,000 feet) max
Velocity Limit	515 meters/sec. (1,000 knots) max
Jerk Limit	20 m/sec*3
ELECTRONIC COMPASS	
Magnetic Measuring scope	50A/m
Azimuth Range	0-359°
Accuracy	±5°
Resolution	3°
BATTERY	
Battery	570mAh Li-ion
Operation Current	Lower than 60mA
Charging Current	300mA
Operating Conditions	

Operating temperature	-10°C—50°C(-2°F ~ 122°F)
Humidity	Operational up to 95% non-condensing
SIZE & WEIGHT	
Dimension (L x W x H)	56 mm x 36mm x 19mm
Weight	40g